THE LEGAL BASIS OF RATE REGULATION. FAIR RETURN ON THE VALUE EMPLOYED FOR THE PUBLIC SERVICE.[1]

Intangible Property.

The valuation of the intangible property is a far more delicate and complicated task. It involves a consideration and determination of the values of all the great unseen factors that have made the complete working plant a possibility. In it is included practically everything, except the depreciation factor, for lacking which the cost of reproduction test has been criticised.[2] The principal qualification that must be brought to this part of the problem is that of experience, because the accuracy of the result will depend, if the view of franchise value here recommended is adopted, entirely upon the intimacy of the estimator with every actual step that must be taken before the complicated plant common to all public utilities can be ready to render the service for which it is designed.

It should be noted here that, in so far as courts are concerned, it is often unnecessary for them to enter into a consideration of the value of intangibles at all. So long as their existence is recognized, they can frequently be used as factors of safety. If it is found that a prescribed rate is close to the line of unreasonableness, taking merely the tangible properties into account, it will, in general, be perfectly safe to declare the rate or schedule unreasonable.[3]

The period of time to be considered in valuing the intangible properties may be roughly divided into three parts; those of development, of construction, and of operation. The construction period, however, is usually overlapped by that of actual operation, since rarely, if ever, is a plant completed before its operation

[1]The first part of this article appeared in the preceding number. XI COLUMBIA LAW REVIEW 532.

[2]For an inventory of the work and expense items which enter into the cost of reproduction of the intangible properties, see article on "Valuation of Intangible Street Railway Property" by Frank R. Ford, 37 Annals of The American Academy of Political and Social Science 119-141.

[3]An Illustration of this use of the intangible factors will be found in the Coney Island 10 cent fare case, Monheimer *v.* Brooklyn Union El. R. R. Co. (Mch. 8, 1910) Pub. Ser. Comm. 1st Dist. N. Y. Nos. 351 & 353, 9.

commences. A great many of the items which enter into the make-up of intangible property will be met with in the first period, that of development, although their actual value will probably not compare with that of single items which extend over all three periods. The principal ones may be classed as promotion, organization, engineering and financing expenses.[4] As in the case of tangible property, the various subdivisions to be considered under each is a matter of detail, and the greater the detail, the greater the accuracy of the result. The valuation should, of course, be made by an engineer who has had experience with the particular species of property under consideration.

There are three items which are generally considered as a part of the intangible property, each of which, either because there is doubt as to whether it should be considered at all, or because the method of its determination is a matter of controversy, requires a separate examination. These are going value, franchises and good-will.

Going Value.

The first of these, "going value," is a well recognized element of present value.[5] There are, however, reasons of expediency for

[4]The propriety of allowing these items is recognized in Lincoln Gas & Electric Light Co. *v.* City of Lincoln (1909) 182 Fed. 926; Monheimer *v.* Brooklyn Union El. R. R. Co. (Mch. 8, 1910) Pub. Serv. Comm. 1st Dist. N. Y. Nos. 351 & 353 (10 cent car fare to Coney Island) 9, and to some extent in Report of St. Louis Pub. Serv. Comm. on Rates for Electric Light etc. Feb. 17th, 1911, 31. In Cedar Rapids Gaslight Co. *v.* Cedar Rapids (1909) 144 Ia. 426, 120 N. W. 966, 970, promotion and organization expenses were disregarded, and in the Spring Valley Water Company *v.* San Francisco (1908) 165 Fed. 657, it was said that the court will not invent intangible values, which are difficult of comprehension or discovery. An item of financing expense over which there has been some difference of opinion is that of *discounts on securities.* In two cases, Hill *v.* Antigo Water Co. (1909) 3 Wis. R. R. Com. Rep. 623 and Columbus Ry. & Light Co. *v.* Columbus C. C., S. D. Ohio, E. Div. No. 1206, Report of Special Master, June 8th, 1906, 35, this has been held to be a proper item, especially when the utility was badly needed in the community at the time the funds were borrowed. And an equal number of authorities, Lincoln Gas & Electric Light Co. *v.* City of Lincoln (1909) 182 Fed. 926, 929; Report of St. Louis Pub. Serv. Comm. on Rates for Electric Light etc. Feb. 17th, 1911, 56-7, take the opposite view, because this is considered merely as increasing the rate of interest, and therefore properly to be considered in determining the rate of return which should be allowed. The latter view seems preferable as it is rather a question of market than of investment.

[5]Brunswick & T. Water Dist. *v.* Maine Water Co. (1904) 99 Me. 371, 59 Atl. 537; Cedar Rapids Gaslight Co. *v.* Cedar Rapids (1909) 144 Ia. 426, 120 N. W. 966, 969; Cedar Rapids Water Co. *v.* Cedar Rapids (1902) 118 Ia. 234, 91 N. W. 1081, 1091; C. H. Venner Co. *v.* Urbana Waterworks (1909) 174 Fed. 348, 352; Cleveland etc. Ry. Co. *v.* Backus (1894) 154 U. S. 439, 444-6; Consolidated Gas Co. *v.* City of New York

its omission from consideration, as well as considerable controversy over the methods of measuring it. It is undoubtedly the most intangible, as well as the most complicated of intangibles. Because of its close relation to many other elements of present value,[6] it is extremely difficult to conceive of it in any definite form. In this it differs somewhat both from franchise and from good-will. Another name for it, which is quite expressive and probably more widely understood, is "going concern."

In its essentials, going value seems very similar to the generally recognized allowance for interest on capital invested during the construction period, under tangibles.[7] It has been variously defined as "the value of a created income," as "potential business value" and as "assurance of * * * technical, operating and business practicability." From the point of view of cost of reproduction, it is "the cost of reproducing a given income." It may be said to be the value of an active, going, profit-making concern, as distinguished from a dormant plant, but, in many respects, cannot be distinguished from franchise and good-will. That all three are closely connected has already been adverted to in discussing the market value of securities test.

(1907) 157 Fed. 849, 871; Galena Water Co. *v.* Galena (1906) 74 Kan. 644, 87 Pac. 735, 736; Gloucester Water Supply Co. *v.* Gloucester (1901) 179 Mass. 365, 60 N. E. 977; Hill *v.* Antigo Water Co. (1909) 3 Wis. R. R. Com. Rep. 623; Kennebec Water District *v.* City of Waterville (1902) 97 Me. 185, 54 Atl. 6, 15, 9; Metropolitan Trust Co. *v.* Houston & Texas T. C. Ry. Co. (1898) 90 Fed. 683, 687; Milwaukee El. Ry. & Light Co. *v.* Milwaukee (1898) 87 Fed. 577; Missouri, Kansas & Texas Ry. Co. *v.* Love (1910) 177 Fed. 493, 496; In re Monongahela Water Co. (1909) 223 Pa. St. 323, 72 Atl. 625; National Waterworks Co. *v.* Kansas City (1894) 62 Fed. 853, 864; Newburyport Water Co. *v.* Newburyport (1897) 168 Mass. 541, 47 N. E. 533; Norwich Gas & Electric Co. *v.* Norwich (1904) 75 Conn. 565, 57 Atl. 746, 750; 2 Wyman, Public Service Corporations (1911) § 1101; Omaha *v.* Omaha Water Co. (1910) 218 U. S. 180; Pennsylvania R. R. Co. *v.* Philadelphia County (1908) 220 Pa. St. 100, 106, 68 Atl. 676, 679; Pioneer Tel. & Tel. Co. *v.* Westenhaver (Jan. 10, 1911) Sup. Ct. of Oklahoma No. 503 (not yet reported); Shepard *v.* Northern Pac. Ry. Co. (1911) 184 Fed. 765, 810; Spring Valley Waterworks Co. *v.* San Francisco (1903) 124 Fed. 574, 595; Spring Valley Water Company *v.* San Francisco (1908) 165 Fed. 667, 693; Columbus Ry. & Light Co. *v.* Columbus, C. C., S. D. Ohio, E. Div. No. 1206, Report of Special Master, June 8th, 1906, 47; Report of St. Louis Pub. Service Comm. on Rates for Electric Light etc. Feb. 17th, 1911, 19-20, 54-56; Beale & Wyman, Railroad Rate Regulation (1906) §§ 363-370; 2 Wyman, Public Service Corporations (1911) § 1101.

[6]Cedar Rapids Water Co. *v.* Cedar Rapids (1902) 118 Ia. 234, 91 N. W. 1081, 1091; Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849, 871, and Kennebec Water District *v.* City of Waterville (1902) 97 Me. 185, 54 Atl. 6, 12, where its similarity to good will and franchise values is either pointed out or is apparent from the discussion itself.

[7]See Metropolitan Trust Co. *v.* Houston & Texas T. C. Ry. Co. (1898) 90 Fed. 683, 688, where the two are confused.

It is usual to give going value weight in the determination of present value by adding a certain percentage to the cost of reproducing the physical property. This is, of course, a makeshift and cannot be justified on any other than statistical grounds. Unless it is to be calculated in a scientific way, it would be better to leave it out of consideration altogether.[8] Mere guess-work can never take the place of actual computation. Going value seems to be just as susceptible of accurate determination as is any other factor which enters into the cost of reproduction. The Wisconsin Railroad Commission, whose views on all questions connected with the general problem are eminently sound and practicable, has worked out this point in detail, and upon a scientific basis.[9] According to its rule, going value is best represented by the sum of the deficits from operation during the development period. By this is meant the entire period from the commencement of operation to the time when the plant becomes a profitable investment, and not the development period which has been referred to once before. These deficits show the value of the "going concern" in the same way that cost of reproduction shows the value of physical properties. The gross earnings during the early years of operation, if not sufficiently large to cover operating expenses, depreciation, and reasonable returns in the form of interest and profits, do not compensate the owners for the use of their property, but, because of the fact that the worth of the services to the public must be taken into account, can be no higher. Such expenses must, then, be met directly by the owners, and they constitute the additional investment necessary to build up the business. These amounts are not, of course, the same which have actually been expended upon the present plant, for they would be open to the usual objections to original cost, but are the amounts which a plant starting at the present time would have to pay in order to secure sufficient business to make it both self-

[8]See Cumberland Tel. & Tel. Co. *v.* Louisville (1911) 187 Fed. 637, 646, for a further suggestion in this regard. There the view is expressed that no separate consideration of going value in necessary for the reason that witnesses in testifying as to the values of the component parts of the plant of a going concern unconsciously allow for that element, and that this allowance in the testimony is sufficient since going value is not capable of accurate measurement even when separately considered.

[9]Hill *v.* Antigo Water Co. (1909) 3 Wis. R. R. Com. Rep. 623. See also Kennebec Water District *v.* City of Waterville (1902) 97 Me. 185, 54 Atl. 6, 14; Pioneer Tel. & Tel. Co. *v.* Westenhaver (Jan. 10, 1911) Sup. Ct. of Oklahoma No. 503 (not yet reported); Report of St. Louis Pub. Serv. Comm. on Rates for Electric Light etc. Feb. 17th, 1911, 19-20, 54-56.

supporting and reasonably profitable. Under this method, the cost of reproducing a given income is principally the sum of two outlays; first, money spent directly in getting business; second, money advanced to cover losses in earlier years of operation. Probably it should also include the fair net earnings during the non-revenue producing period.[10]

Another method of measuring going value has caused considerable discussion among engineers.[11] It is said that the cost of the reproduction of the income of any existing plant will be the difference between the net results of its operation and the net results of the operation of a well-conducted starting plant, through the time necessary to enable the starting plant to be completed and attain an income equal to that of the going plant. This is to be measured by the sum of the yearly amounts of revenue reduced to present value, which such plant in operation will produce in excess of what new works of a like character can be made to produce, between the time of purchase and that time in the future when the revenue of the two works become equal, proper allowance being made for the difference in cost of maintenance.

The following apparently cogent criticism of these methods of estimating going value appears in the recent case of *Spring Valley Water Co.* v. *San Francisco*,[12] where Farrington, *D. J.*, said:

"Furthermore if it be conceded that early deficiency of revenue is the proper measure of value for the present going business, then it follows that, the greater the deficiency and the more unprofitable the business, the greater the present value of the going concern; and, if the business had yielded large profits from its very inception, the going business to-day would be worthless."

This merely emphasizes the fact that going value, like the other factors of present value, cannot safely be based on actual cost, for like them it is subject to depreciation. The cost of producing a going business equal to the present one may to-day be

[10]See article by W. H. Bryan on "Going Value as an Element in the Appraisal of Public Utility Properties," Journal of Associated Engineering Societies, Oct. 1909.

[11]See "Notes on Going Value and Methods for its Computation" by John W. Alvord, Proceedings of American Water Works Association, 1909. In this same number is contained considerable discussion of the subject by W. H. Bryan, Leonard Metcalf and Benezette Williams, see also Vol. 34 American Society of Civil Engineers pp. 1128 *et seq.*

[12](1908) 165 Fed. 667, 697.

practically nothing. Take, for example, a waterworks. Twenty-five or thirty years ago it was necessary to educate the public to the use of water under pressure. To-day that is unnecessary, so that it is extremely important that cost of production of the given income should be calculated only under actual present conditions.[13]

Franchises.

The second, "franchises," are equally well recognized as property for which compensation must be given in condemnation proceedings, and which may be separately taxed.[14] But whether they are to be considered at all in rate-making, and, if so, how their value is to be measured, are greatly controverted[15] and closely related questions.

Upon principle it would seem that in rate-making the franchises should be considered only to the extent that it will cost to reproduce them; that is, by the actual expenditure necessary to obtain and retain them.[16] This is the theory adopted by the

[13]In Report of St. Louis Pub. Serv. Comm. on Rates for Electric Light etc. Feb. 17th, 1911, 19, it was held, in an attempt to meet the difficulty, that the period during which the deficit is capitalized as a cost of establishing the business should be limited to a reasonable time at the beginning. It is worthy of note that in tax cases, where only the property within a state is being valued, the additional going value which that property has as a part of a larger system is recognized. Cleveland etc. Ry. Co. *v.* Backus (1894) 154 U. S. 439, 444; State ex rel. Bee Bldg. Co. *v.* Savage (1902) 65 Neb. 756, 91 N. W. 716, 724, and Western Union Tel. Co. *v.* Gottlieb (1903) 190 U. S. 412. If Capital City Gaslight Co. *v.* Des Moines (1896) 72 Fed. 829, 842, is law, experiments in the art are not a proper item of expense, and can not be considered in determining present value.

[14]Town of Bristol *v.* Bristol & Warren Waterworks (1901) 23 R. I. 274, 49 Atl. 974; Brunswick & T. Water Dist. *v.* Maine Water Co. (1904) 99 Me. 371, 59 Atl. 537; Gloucester Water Supply Co. *v.* Gloucester (1901) 179 Mass. 365, 60 N. E. 977; Kennebec Water District *v.* City of Waterville (1902) 97 Me. 185, 54 Atl. 6; In re Monongahela Water Co. (1909) 223 Pa. St. 323, 72 Atl. 625; Montgomery Co. *v.* Schuylkill Bridge Co. (1885) 110 Pa. St. 54, 20 Atl. 405; Omaha *v.* Omaha Water Co. (1910) 218 U. S. 180; Mifflin Bridge Co. *v.* County of Juniata (1891) 144 Pa. St. 365, 22 Atl. 896; State ex rel. Bee Bldg. Co. *v.* Savage (1902) 65 Neb. 714, 756; Wilcox *v.* Consolidated Gas Co. (1909) 212 U. S. 19; 2 Wyman, Public Service Corporations (1911) § 1103.

[15]See Beale & Wyman, Railroad Rate Regulation (1906) §§ 362-364; 2 Wyman, Public Service Corporations (1911) § 1104.

[16]Cumberland Tel. & Tel Co. *v.* Louisville (1911) 187 Fed. 637, 647; Hill *v.* Antigo Water Co. (1909) 3 Wis. R. R. Com. Rep. 623; Lincoln Gas & Electric Light Co. *v.* City of Lincoln (1909) 182 Fed. 926, 928; Columbus Ry. & Light Co. *v.* Columbus, C. C., S. D. Ohio, E. Div. No. 1206, Report of Special Master, June 8, 1906, 34. See also, an article by William O. Morgen, on "Indeterminate Permit as a Satisfactory Franchise," 37 Annals of the American Academy of Political & Social Science.

Wisconsin Railroad Commission. The actual expense of procuring these grants from the proper authority, either state or local, is just as much a part of the necessary investment as is the cost of the plant which is to be operated under their sanction. But it will be found that there is an absurdity in recognizing any further value of the franchises of a public service corporation whose rates may be regulated.[17] Land, labor, chattels and all other elements which enter into a complicated public service investment have value and earning power in and by themselves.[18] The franchise, however, has none.[19] It is merely the necessary authority for using the other values in a certain way. It is admitted that property in use has a greater value than when lying idle, but that element is allowed for in "going value."

Although there are inherent reasons for not recognizing franchises as an element of value in rate-making, it is a fact that they are almost universally acknowledged to be an element,[20] and the reasons given are that they are everywhere held to be invested with all the attributes of property, are taxable, inheritable, alienable and subject to levy and sale under execution, and to condemnation under the exercise of the power of eminent domain. In short, the reason for adopting present value as the basis of rate regulation is deemed conclusive of this question also. Regulation is *pro tanto* condemnation. Compensation based on earning power must be given for the taking of franchises in condemnation proceedings. Therefore, they must likewise be given a value in rate regulation.

It is submitted that the questions involved in the two proceedings are dissimilar, and that the reasoning is, therefore, fallacious. Take, for example, the case of a public service corporation which has a contract right to charge a rate which admittedly could otherwise be reduced without violating its constitutional rights. There no regulation of rates is possible, and the franchise is considered worth the amount which the excess of contract rates over reason-

[17]For a full discussion of the question, see Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849, 873-6.

[18]Brunswick & T. Water Dist. *v.* Maine Water Co. (1904) 99 Me. 371, 59 Atl. 537.

[19]Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849.

[20]Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849; National Water Works Co. *v.* Kansas City (1894) 62 Fed. 853; Spring Valley Waterworks *v.* San Francisco (1903) 124 Fed. 574; Spring Valley Water Co. *v.* San Francisco (1908) 165 Fed. 667; Columbus Ry. & Light Co. *v.* Columbus, C. C., S. D. Ohio, E. Div. No. 1206, Report of Special Master, June 8, 1906, 34.

able rates will give if capitalized at fair interest. Now, remove the contract protection. Either the rates may be reduced to a point where the franchises have no value whatever, above the amount of money that is actually invested in them, or there can be no regulation at all, for capitalization of the residue over and above a fair return on the present value of the physical property will always give a total valuation which renders reduction of rates impossible.[21] It seems, therefore, that the fact that regulation is possible robs the franchise of its value without thereby rendering the regulation confiscatory and unconstitutional.

Nor is the fact that the franchise value for the purpose of taxation is assessed in exactly the way above indicated conclusive. Such taxation may be considered as based upon ability to pay, rather than upon actual value.

Whatever discoverable value franchises may have should certainly be weighed in determining valuation. There is, however, no reason for going beyond this to confer upon intangible properties an additional element of value, which is neither apparent nor discoverable.[22] The distinction between productive and non-

[21]The character of the franchises, whether legally or practically exclusive, and their duration, are recognized as important considerations in determining their value, in the condemnation cases. Town of Bristol *v.* Bristol & Warren Waterworks (1901) 23 R. I. 274, 49 Atl. 974; Gloucester Water Supply Co. *v.* Gloucester (1901) 179 Mass. 365, 60 N. E. 977; Kennebec Water Dist. *v.* City of Waterville (1902) 97 Me. 185, 54 Atl. 6; Omaha *v.* Omaha Water Co. (1910) 218 U. S. 180. See also Hill *v.* Antigo Water Co. (1909) 3 Wis. R. R. Com. Rep. 623; and Beale & Wyman, Railroad Rate Regulations (1906) §§ 365-7. The fact that franchise values may be destroyed by rate regulation is recognized in Brunswick & T. Water Dist. *v.* Maine Water Co. (1904) 99 Me. 371, 59 Atl. 537; Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849; Willcox *v.* Consolidated Gas Co. (1909) 212 U. S. 19; Report of St. Louis Pub. Ser. Comm. on Rates for Electric Light, etc., Feb. 17, 1911, 57-8; and in the last cited proceeding is deemed a sufficient reason for rejecting them. See also 15 Harv. L. Rev. 267-8. It is held that if their value is to be based on earnings, as it is usually said it must be, Town of Bristol *v.* Bristol & Warren Waterworks (1901) 23 R. I. 274, 49 Atl. 974; Clarion Turnpike & Bridge Co. *v.* Clarion County (1896) 172 Pa. St. 243, 23 Atl. 580; Kennebec Water Dist. *v.* City of Waterville (1902) 97 Me. 185, 54 Atl. 6; Montgomery Co. *v.* Schuylkill Bridge Co. (1885) 110 Pa. St. 54, 20 Atl. 405; People ex rel. Jamaica Water Supply Co. *v.* Tax Comrs. (1908) 196 N. Y. 39, modified 128 App. Div. 13, 39; Mifflin Bridge Co. *v.* County of Juniata (1891) 144 Pa. St. 365, 22 Atl. 896; State ex rel. Bee Bldg. Co. *v.* Savage (1902) 65 Neb. 714, 756, 91 N. W. 716; reasonable earnings only will be considered. Cedar Rapids Gaslight Co. *v.* Cedar Rapids (1909) 144 Ia. 426, 120 N. W. 966, 969; Kennebec Water District *v.* City of Waterville (1902) 97 Me. 185, 54 Atl. 6, 13; see also Cotting *v.* Kansas City Stock-Yards Co. (1897) 82 Fed. 829, 850, 854, reversed 183 U. S. 79, on other grounds.

[22]Spring Valley Water Company *v.* San Francisco (1908) 165 Fed. 667, 696.

productive property must be constantly borne in mind.[23] It would seem that the value of income to be expected in the future is sufficiently recognized in the allowance for going value, which is a real investment.[24] In fact, it does not seem possible to separate them, as an examination of the discussions of this question by various courts will show.[25] It seems apropos to repeat here the former suggestion, if some allowance for franchise value is insisted upon, that the value of the two combined might be measured by the difference between the present value of the physical properties and the normal market value of the securities.[26]

In the recent case of *Willcox* v. *The Consolidated Gas Co.*,[27] an excellent opportunity to set at rest this vexed question was presented to the Supreme Court of the United States. The peculiarity of the facts of the case was, however, deemed a sufficient reason for limiting the holding by them.[28] It appeared in that case that the franchises had been capitalized in the consolidation of a number of gas companies into the complainant company. This capitalization value was recognized in the special act of the legislature authorizing the consolidation. The lower court, while on principle deeming franchise values entirely out of place in rate regulation, thought itself bound by authority to recognize them, and allowed not only for the capitalization value, but also for an appreciation in proportion to the increase in value of the physical properties.[29] On appeal the Supreme Court held that the State was estopped to question the franchise value which it had thus recognized and upon which purchasers of the stock must consequently have relied, but that there was no reason for allowing the appreciation. Some

[23]Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849.

[24]Omaha *v.* Omaha Water Co. (1910) 218 U. S. 180, 202.

[25]Town of Bristol *v.* Bristol & Warren Waterworks (1901) 23 R. I. 274, 49 Atl. 974; Brunswick & T. Water Dist. *v.* Maine Water Co. (1904) 99 Me. 371, 59 Atl. 537; Cedar Rapids Gaslight Co. *v.* Cedar Rapids (1909) 144 Ia. 426, 120 N. W. 966, 969; Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849, 871-2.

[26]Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849, 877-8; Missouri, Kansas & Texas Ry. Co. *v.* Love (1910) 177 Fed. 493, 496; San Francisco National Bank *v.* Dodge (1905) 197 U. S. 70, 80; Spring Valley Water Company *v.* San Francisco (1908) 165 Fed. 667, 695.

[27](1909) 212 U. S. 19.

[28]Lincoln Gas & Electric Light Co. *v.* City of Lincoln (1909) 182 Fed. 926, 928; Report of St. Louis Pub. Serv. Comm. on Rates for Electric Light etc., Feb. 17, 1911, 57-8, distinguishing it on this ground.

[29]Consolidated Gas Co. *v.* The City of New York (1907) 157 Fed. 849, 877-8.

of the discussion in the case indicates that, when the question is squarely decided, franchise values, such as those found in tax assessments, will not be allowed in valuation for the purpose of rate regulation.[30]

Good-will.

The courts with one voice say that "good-will" is not to be considered in the valuation of the property of a public service corporation, either in rate regulation or condemnation cases.[31] This holding, it is submitted, goes further than principle warrants. It would be more accurate to say that "good-will" is so closely related to going value that the allowance of the latter is in most cases sufficient.

Good-will is defined in a leading case[32] as

"'all that good disposition which customers entertain toward a house of business * * * which may induce them to continue giving their custom to it.'"

It is, of course, largely based on free competition and voluntary patronage, and depends upon the ability and energy devoted to serving the public. The assumption, so frequently indulged in by the courts, that these elements are necessarily absent from public service businesses, while perhaps warranted in the particular case, is, as a general proposition, entirely too broad. It is not intended, here, to take up the cudgels in favor of another element of intangible property, the valuation of which will cause another infinity of perplexities. But it should be pointed out, for the sake of principle and in justice to the memory of our maligned public utilities, that competition for the patronage of the public is by no means entirely absent from the business of serving it. One example will suffice to make the point.

In a small municipality, there are a gas plant and an electric light plant, separately owned. The service rendered by the former is excellent, both as to quantity and pressure. That ren-

[30]For a discussion of this portion of the opinion in the Willcox case, see 9 COLUMBIA LAW REVIEW 160, *et seq.* It should be noted that franchise values are often allowed as a certain percentage of tangible values, (see 37 Annals of The American Academy of Political & Social Science 127-8), a method of measuring intangibles which has already been criticised.

[31]Consolidated Gas. Co. *v.* City of New York (1907) 157 Fed. 849, 871; Hill *v.* Antigo Water Co. (1909) 3 Wis. R. R. Com. Rep. 623; Kennebec Water District *v.* City of Waterville (1902) 97 Me. 185, 54 Atl. 6, 19; Omaha *v.* Omaha Water Co. (1910) 218 U. S. 180, 202; Willcox *v.* Consolidated Gas Co. (1909) 212 U. S. 19; 15 Harv. L. Rev. 268; 2 Wyman, Public Service Corporations (1911) § 1102.

[32]Washburn *v.* National Wall-Paper Co. (1897) 81 Fed. 17, 20.

dered by the latter is extremely variable, because the plant cannot carry its peak load, and because it has no adequate repair service for contingent breakdowns. Both companies are subject to rate regulation by the municipality. The gas company has 90% of the lighting business, the principal customer of the electric company being the local street railway. It is perfectly evident that under such circumstances a commercially valuable "good-will" exists. Possibly the consumer should not be obliged to pay a higher rate because he favors a particular corporation, but where high efficiency has brought about such favor its value should be recognized at some stage in the determination of rates.

IV. Fair Return and the Elements to be Considered in its Determination.

The remainder of the problem consists of the determination of what is a fair return on present value, the means of ascertaining which have been principally under consideration up to this point. This is a much simpler matter, for its component parts have been the subject of less controversy, and are more generally understood. It is largely a question of the cost to the utility of the services rendered, and includes all legitimate and necessary outlays for operating expenses of all kinds, including repairs and replacements.[33] When the rates are high enough to cover all of these, together with interest on the amounts legitimately invested and efficiently and economically expended in securing the plant and in developing its business, the obligations of the consumers toward the investors end.[34]

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[33] 2 Wyman, Public Service Corporations (1911) § 1151.

[34] Cedar Rapids Gaslight Co. *v.* Cedar Rapids (1909) 144 Ia. 426, 120 N. W. 966, 974; Cedar Rapids Water Co. *v.* Cedar Rapids (1902) 118 Ia. 234, 21 N. W. 971, 1081; C. H. Venner Co. *v.* Urbana Waterworks (1909) 174 Fed. 348, 352; Contra Costa Water Co. *v.* Oakland (1904) 165 Fed. 518, 532; Cumberland Telephone & Telegraph Co. *v.* Memphis (1908) 183 Fed. 875; Kennebec Water District *v.* City of Waterville (1902) 97 Me. 185, 54 Atl. 6, 14; Missouri Pacific Ry. Co. *v.* Smith (1895) 60 Ark. 221, 29 S. W. 752, 755; Monheimer *v.* Coney Is. & Bklyn R. R. Co., Pub. Serv. Comm. First Dist. N. Y. Jan. 10, 1911 (Coney Island 10 cent fare case); New Memphis Gas & Light Co. *v.* Memphis (1896) 72 Fed. 952; People ex rel. Jamaica Water Supply Co. *v.* Tax Comrs. (N. Y. 1908) 128 App. Div. 13, 17, modified 196 N. Y. 39; Pioneer Tel. & Tel. Co. *v.* Westenhaver (Jan. 10, 1911) Sup. Ct. of Oklahoma, No. 503 (not yet reported); San Diego Land & Town Co. *v.* Jasper (1898) 89 Fed. 274, 280, s. c. (1910) 110 Fed. 702; Columbus Ry. & Light Co. *v.* Columbus, C. C., S. D. Ohio, E. Div., No. 1206 Report of Special Master, June 8th, 1906, 49; Report of St. Louis Pub. Serv. Comm. on Rates for Electric Light etc., Feb. 17th, 1911, 67; Noyes, American Railroad Rates (1905) 25; 3 Thompson, Corporations (2nd ed. 1909) § 2970.

Operating Expenses.[35]

The difficulties of the task of ascertaining operating expenses have been summarized by Professor Wyman as follows:

"The real cost of operation is not so easy a figure to determine as one might first suppose. Certain items of annual expenditure should obviously be included as annual charges, such as wages and supplies, provided that such expenditures have not been unreasonable. But as to other expenditures there is difficulty in deciding whether they should be included as current expenses or provided for out of new capital, such as replacements and betterments. Involved in this problem is the accounting permissible in allowing for depreciation and reparation. And in this connection the propriety of setting aside a sinking fund or providing against amortization should be considered."[36]

After all, however, it presents a comparatively simple engineering problem. An engineer of experience in the actual operation of any particular kind of plant should be capable of calculating the items quite accurately. The principal ones always allowed include the cost of maintenance and current repairs,[37] taxes,[38] insurance, salaries and the like.[39] The only qualifications necessary to admit them into the computation are that they shall be usual and reasonable.[40]

[35]For a detailed examination of this subject, see Beale & Wyman, Railroad Rate Regulation (1906) §§ 411-436; 2 Wyman, Public Service Corporations (1911) §§ 1150-1180.

[36]2 Wyman, Public Service Corporations (1911) § 1150.

[37]In re Arkansas Railroad Rates (1909) 168 Fed. 720; Brymer *v.* Butler Water Co. (1897) 179 Pa. St. 231, 36 Atl. 249; San Diego Water Co. *v.* City of San Diego (1897) 118 Cal. 556, 50 Pac. 633, 644; 2 Wyman, Public Service Corporations (1911) § 1158.

[38]In re Arkansas Railroad Rates (1909) 168 Fed. 720; Cedar Rapids Gaslight Co. *v.* Cedar Rapids (1909) 144 Ia. 426, 120 N. W. 966, 974; Cumberland Telephone & Telegraph Co. *v.* Memphis (1908) 183 Fed. 875; People ex rel. Jamaica Water Supply Co. *v.* Tax Comrs. (1909) 196 N. Y. 39, 57, modified 128 App. Div. 13; San Diego Water Co. *v.* City of San Diego (1897) 118 Cal. 556, 50 Pac. 633, 644; Wilcox *v.* Consolidated Gas. Co. (1909) 212 U. S. 19; Beale & Wyman, Railroad Rate Regulation (1906) § 417; 2 Wyman, Public Service Corporations (1911) § 1154.

[39]2 Wyman, Public Service Corporations (1911) § 1152. In re Arkansas Railroad Rates (1909) 168 Fed. 720; Cumberland Telephone & Telegraph Co. *v.* Railroad Commission (1907) 156 Fed. 823, 828, reversed 212 U. S. 414. Expenditure in getting business is a proper expense; In re Arkansas Rate Cases (1911) 181 Fed. 290, 316; Beale & Wyman, Railroad Rate Regulation (1906) § 422; 2 Wyman, Public Service Corporations (1911) § 1153. As to rents of properties not owned, see Columbus Ry. & Light Co. *v.* Columbus, C. C., S. D. Ohio, E. Div., No. 1206, Report of Special Master, June 8th, 1906, 35, 51; 2 Wyman, Public Service Corporations (1911) §§ 1179, 1180.

[40]Cumberland Telephone & Telegraph Co. *v.* Railroad Commission (1907) 156 Fed. 823, 828, reversed 212 U. S. 414; San Diego Water Co. *v.* City of San Diego (1897) 118 Cal. 556, 50 Pac. 633, 644.

Questionable Items.

There are a few doubtful items which require a separate consideration. The first of these is the cost of betterments and improvements. The very terms suggest that this is not properly an item of operating expense, but rather a capital charge, which is the fact.[41] To the extent that worn-out parts of a plant must be replaced, the problem is a different one, and will be discussed below under Depreciation Reserves. But all expenditures actually over and above the necessary replacements go to increase the value of the investment rather than to keep it intact, and should be charged, therefore, to the capital account. They play no part in operating expense beyond the extent to which they perform the function of replacement. The doubt connected with the allowance of this item seems to be due to an opinion of the Supreme Court of the United States,[42] which in fact concerned only the spirit of certain statutory provisions in aid of railroads, and had nothing whatever to do with rate regulation. That was a question of the extent of a legislative favor, this is one of constitutional right.

Another such item is that of interest on the funded debt of the corporation. It is common knowledge that a large part of the original capital of corporations of all kinds is obtained by the sale of bonds secured by mortgages upon the properties, often at a discount. These are merely loans which bear a fixed rate of interest. It is frequently contended that this fixed charge is an operating expense.[43] Doubtless it is, from the point of view of

[41]Brymer *v.* Butler Water Co. (1897) 179 Pa. St. 231, 36 Atl. 249; Coal & Coke Ry. Co. *v.* Conley (W. Va. 1910) 67 S. E. 613, 641; Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849, 865; Cotting *v.* Kansas City Stock-Yards Co. (1897) 82 Fed. 839, reversed 183 U. S. 79, on other grounds; Illinois Central etc. R. R. Co. *v.* Interstate Commerce Comm. (1907) 206 U. S. 441, 462; Investigation of advances in rates No. 3400, decided by the Interstate Commerce Comm. Feb. 22, 1911, 23; Louisiana R. R. Comm. *v.* Cumberland Tel. Co. (1909) 212 U. S. 414, reversing 156 Fed. 823; Monheimer *v.* Coney Is. & Bklyn. R. R. Co. Pub. Serv. Comm. 1st Dist., N. Y., July 2, 1909, No. 350 (Coney Island 10 cent fare case); San Diego Water Co. *v.* City of San Diego (1897) 118 Cal. 556, 50 Pac. 633; Beale & Wyman, Railroad Rate Regulation (1906) §§ 425-429; 2 Wyman, Public Service Corporations (1911) §§ 1160-1165.

[42]Union Pacific R. R. Co. *v.* U. S. (1878) 99 U. S. 402. See also Illinois Central etc. R. R. Co. *v.* Interstate Commerce Com. (1907) 206 U. S. 441, 462; Metropolitan Trust Co. *v.* Houston & Texas T. C. Ry. Co. (1898) 90 Fed. 683, 690; Southern Pacific Co. *v.* Board of Railroad Commrs. (1896) 78 Fed. 236, 264. This side of the question is discussed in 92 The Commercial & Financial Chronicle 1209.

[43]See San Joaquin & Kings River C. & I. Co. *v.* Stanislaus County (1908) 163 Fed. 567, 575; Beale & Wyman, Railroad Rate Regulation (1906) §§ 388, 437; 2 Wyman, Public Service Corporations (1901) § 1156.

the investor, but hardly so from that of the public. The investors are entitled to a reasonable return upon the present value of the investment. One and the same investment cannot well be regarded as the property of two separate sets of investors; the bondholders entitled to a fixed rate of interest to be charged to operating expenses, and the stockholders entitled to a variable rate of return proportioned to the amount of risk involved in that particular enterprise. For rate-making purposes the investment must be considered as solely that of the stockholders, and the amount of interest which they pay their lenders is purely their own concern. The same may be said of the contention that gross income should allow for the accumulation of a sinking fund to pay off the debt.[44] That, too, should come out of the pockets of the stockholders, not from the public. Otherwise, the latter would, in most cases, be virtually purchasing a plant, which would in the end belong, free and clear of debt, to the stockholders, who would not be obliged to risk a single penny.[45]

Other doubtful items of allowance can generally be disposed of by the test of whether they are usual and necessary expenditures in the operation of any particular property. Thus, an allowance for damages for injuries, although invariably opposed, is certainly a proper item.[46] No amount of care in operating can prevent accidents resulting in such injuries, particularly in the case of transportation companies. On the other hand, the expense of litigation over rates, or franchise tax assessments, or fines imposed for the violation of regulatory statutes, can hardly be regarded as regularly recurring necessary expense.[47] It might be

[44]Houston & Texas Central Railway Co. *v.* Storey (1906) 149 Fed. 499, 503.

[45]See In re Arkansas Railroad Rates (1909) 168 Fed. 720; San Diego Land & Town Co. *v.* National City (1896) 74 Fed. 79, 87, affd. 174 U. S. 739; San Diego Water Co. *v.* City of San Diego (1897) 118 Cal. 556, 50 Pac. 633; Spring Valley Waterworks *v.* San Francisco (1903) 124 Fed. 574; Steenerson *v.* Great Northern Ry Co. (1897) 69 Minn. 533, 72 N. W. 713, 715; 2 Wyman, Public Service Corporations (1911) §§ 1131, 1132; Columbus Ry. & Light Co. *v.* Columbus C. C., S. D. Ohio, E. Div., No. 1206, Report of Special Master, June 8th, 1906, 35; Report of St. Louis Pub. Serv. Comm. on Rates for Electric Light etc., Feb. 17th, 1911, 57, as to the effect which the rate of interest on the secured indebtedness may have upon the rate of return, and *infra;* "Interest and Profit."

[46]In re Arkansas Rate Cases (1911) 187 Fed. 290, 306; People ex rel. Third Avenue R. R. Co. *v.* Tax Comrs. (N. Y. 1909) 136 App. Div. 155, 157; Beale & Wyman, Railroad Rate Regulation (1906) § 421; 2 Wyman, Public Service Corporations (1911) § 1159.

[47]In re Arkansas Rate Cases (1911) 187 Fed. 290, 315; Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849.

proper to carry a small reserve to meet the first two, but the investors must not expect to be absolutely secured by the public against every contingency. Otherwise, it will be necessary to cut down materially the rate of interest to which they are entitled.[48]

Depreciation Reserves.[49]

It is a well-known and judicially recognized fact that, while a new plant can be maintained in a condition to render service which is fairly constant in amount merely by proper expenditures for current repairs, the time eventually comes when practically every unit of equipment must be replaced. This is not true of land, of course, and may not apply to some structures, but these are the exception. The cost of current repairs has been disposed of as a proper item of operating expense, and the problem now to be considered is that of allowing for a fund to meet comparatively heavy and irregularly recurring expenditures for the ultimate replacement of worn-out, inadequate and obsolete parts and structures.

Before any adequate idea of the reasons for, and of the elements which enter into the determination of, a depreciation reserve can be obtained, it is necessary to consider two factors which fix the length of the useful life of all kinds of equipment. They are: first, its inherent liability to deterioration from the effects of use and time so that it can no longer be economically employed even with proper current repairs; second, a further and similar tendency due to improvements in the art causing changes in the character and amount of the service required and bringing about the use of more economically operated but equally efficient units of equipment. The first has been aptly denominated "decrepitude," while the second is commonly known as "obsolescence."

It is perfectly evident that expenses caused in these two ways are more or less regularly recurring and proper expenses of

[48]See Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849, 866; Investigation of advance in rates No. 3400, decided by the Interstate Commerce Comm. Feb. 22, 1911; Beale & Wyman, Railroad Rate Regulation (1906) § 400.

[49]For discussion of the depreciation problem, see Beale & Wyman, Railroad Rate Regulation (1906) §§ 430-436; 2 Wyman, Public Service Corporations (1911) §§ 1166-1173; article by William B. Jackson, "The Depreciation Problem," 37 Annals of The American Academy of Political & Social Science 31-42; paper read before the American Water Works Association, June, 1903, by John W. Alvord, with tables for computing the annual increment where sinking fund method is used; (1908) 34 American Society of Civil Engineers 1115 *et seq.*, containing formulæ for computing depreciation; 15 Harv. L. Rev. 262-265; Cumberland Tel. & Tel. Co. *v.* Louisville (1911) 187 Fed. 637, 652.

operation. They are necessary both for the safety and the convenience of the public, as well as for the protection of the investment. The latter phase of the question is well understood and has been previously noted. As far as the convenience of the public is concerned, that is most closely bound up with "obsolescence," which has only more recently been adequately discussed.[50] Such expenses cannot be entirely disregarded, for, if earnings large enough to permit of the accumulation of a reserve to meet them are all paid out in the form of dividends, the interest of the public in an adequate and safe service are disregarded. Or, if earnings are not permitted to be large enough for the purpose of providing therefor, the investment will be impaired and the owners thus deprived of a fair return. They cannot properly be charged to capital account, for, except in so far as improvement, as well as replacement, enters in, the value of the investment is not increased. Nor can they properly be charged against the operating expenses of any particular year, because that would be unfair to one set of users and partial to another.

In order to dispose of these difficulties, the right of public service companies to accumulate depreciation reserves by means of an annual charge to operating expense, must be recognized.[51]

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[50]Dodgeville *v.* Dodgeville Elec. Lt. & Power Co. (1908) 2 Wis. R. R. Com. Rep. 392, 406; Investigation of advance in rates No. 3400, decided by the Interstate Commerce Comm. Feb. 22, 1911; People ex rel. Brooklyn Heights R. R. Co. *v.* Tax Comrs. (N. Y. 1910) 69 Misc. 646, 655; People ex rel. Queens Co. Water Co. *v.* Woodbury (N. Y. 1910) 67 Misc. 490, 493; Pioneer Tel. & Tel. Co. *v.* Westenhaver (Jan. 10, 1911), Sup. Ct. of Oklahoma, No. 503 (not yet reported); Report of St. Louis Pub. Serv. Comm. on Rates for Electric Light, etc., Feb. 17th, 1911. This factor is especially important in electrical enterprises.

[51]Brymer *v.* Butler Water Co. (1897) 179 Pa. St. 231, 36 Atl. 249; Cedar Rapids Gaslight Co. *v.* Cedar Rapids (1909) 144 Ia. 426, 120 N. W. 966, 972; Contra Costa Water Co. *v.* Oakland (1904) 165 Fed. 518, 532; Cotting *v.* Kansas City Stock-Yards Co. (1897) 82 Fed. 850, 855, reversed 183 U. S. 79, on other grounds; Cumberland Tel. & Tel. Co. *v* Louisville (1911) 187 Fed. 637, 652; Cumberland Telephone & Telegraph Co. *v.* Memphis (1908) 183 Fed. 875; Dodgeville *v.* Dodgeville Elec. Lt. & Power Co. (1908) 2 Wis. R. R. Com. Rep. 392, 406; Hill *v.* Antigo Water Co. (1909) 3 Wis. R. R. Com. Rep. 623; Home Tel. Co. *v.* Carthage (Mo. 1911) 139 S. W. 547, 552; Investigation of advances in rates No. 3400, decided by the Interstate Commerce Comm. Feb. 22, 1911; Lincoln Gas & Electric Light Co. *v.* City of Lincoln (1909) 182 Fed. 926, 929; Milwaukee El. Ry. & Light Co. *v.* Milwaukee (1898) 87 Fed. 577, 582; Monheimer *v.* Brooklyn Union El. R. R. Co. (Mch. 8, 1910) Pub. Ser. Comm. 1st Dist. N. Y. Nos. 351 & 353 (10 cent car fare to Coney Island); Monheimer *v.* Coney Is. & Bklyn. R. R. Co., Pub. Serv. Comm. First Dist., N. Y., July 2, 1909, No. 350 (Coney Island 10 cent fare case); People ex rel. Brooklyn Heights R. R. Co. *v.* Tax Comrs. (N. Y. 1910) 69 Misc. 646, 655; People ex rel. Jamaica Water Supply Co. *v.* Tax Commis-

The calculation of the annual increment of such a reserve is an engineering problem only slightly more difficult than that of ordinary operating expense. It naturally requires considerable experience in water supply, street railway transportation, or whatever business is under consideration.[52]

It is suggested that the amount to be set aside each year might be calculated as follows: the sum of the average present values of the cost of the renewal of each unit of equipment divided by the number of years of service which each will give, will be the annual addition to the depreciation reserve.

Interest and Profits.

There remains but one other consideration—that of net return. Economists would probably say that it is made up of two items: interest proper or the wages of capital, and profits or the wages of management. Such a separation of the question into two parts has received some consideration from the Wisconsin Railroad Commission,[53] but little from the courts, and may be disregarded in this discussion as not of practical moment. The simple ques-

sioners (N. Y. 1908) 128 App. Div. 13, modified 196 N. Y. 39; People ex rel. Jamaica Water Supply Co. *v.* Comrs. (1909) 196 N. Y. 39, modified 128 App. Div. 13; People ex rel. Third Avenue R. R. Co. *v.* Comrs. (N. Y. 1909) 136 App. Div. 155, 159, affd. 198 N. Y. 608, without opinion; Perkins *v.* Northern Pacific Railway Co. (1907) 155 Fed. 445, 451; Pioneer Tel. & Tel. Co. *v.* Westenhaver (Jan. 10, 1911) Sup. Ct. of Oklahoma, No. 503 (not yet reported); Reagan *v.* Farmers' Loan & Trust Co. (1894) 154 U. S. 362, 407; Sandusky-Portland Cement Co. *v.* Baltimore & O. R. Co. (1911) 187 Fed. 583, 585; San Joaquin & Kings River C. & I. Co. *v.* Stanislaus County (1908) 163 Fed. 567, 572; Spring Valley Waterworks *v.* San Francisco (1903) 124 Fed. 574; Spring Valley Water Company *v.* San Francisco (1908) 165 Fed. 667, 703; Columbus Ry. & Light Co. *v.* Columbus, C. C., S. D. Ohio, E. Div., No. 1206, Report of Special Master, June 8th, 1906; Report of St. Louis Pub. Serv. Comm. on Rates for Electric Light etc., Feb. 17th, 1911. *Contra,* Cedar Rapids Water Co. *v.* Cedar Rapids (1902) 118 Ia. 254, 91 N. W. 1081; San Diego Land & Town Company *v.* Jasper (1901) 110 Fed. 702, 715, affd. 189 U. S. 439; San Diego Water Co. *v.* City of San Diego (1897) 118 Cal. 556, 50 Pac. 633, 642; 2 Wyman, Public Service Corporations (1911) § 1166.

[52]Whether any allowance shall be made for amortization of franchises depends, primarily of course, upon whether they have any value which is to be considered in ratemaking. Such an allowance was held to be proper in Milwaukee El. Ry. & Light Co. *v.* Milwaukee (1898) 87 Fed. 577, 582. See Beale & Wyman, Railroad Rate Regulation (1906) § 436; 2 Wyman, Public Service Corporations (1911) § 1173. This depreciation factor is often used as one of safety in considering rates. See Milwaukee El. Ry. & Light Co. *v.* Milwaukee (1898) 87 Fed. 577, 585.

[53]Hill *v.* Antigo Water Co. (1909) 3 Wis. R. R. Com. Rep. 625, see also Beale & Wyman, Railroad Rate Regulation (1906) § 371.

tion is, What is a fair net return or interest upon the present value of a plant?[54]

In attempting to answer this question the court in *Consolidated Gas Co.* v. *The City of New York,* put to itself another question:

"What would that prudent man acquainted with business (so familiar to the readers of legal literature) do regarding such an investment, if it were offered to him?"

This, in turn, can be answered only by pointing out the considerations which would enter into the prudent man's decision. These have been stated by Judge Sanborn in the recent Minnesota Rate case:[55]

"The character of the business in which an investment is made, the locality in which it is placed, the returns secured in that locality from other investments of a similar nature, the uniformity and certainty of the return, and the risks to which the principal and income from it are subjected condition the measure of a fair return upon capital invested."

What he would first seek to ascertain would be the amount of risk or hazard involved.[56] This will depend upon whether the business is an established one, whether its custom is steady or fluctuating, increasing or decreasing, *et cetera.* If the manage-

[54]See Beale & Wyman, Railroad Rate Regulation (1906) §§ 381-406; 15 Harv. L. Rev. 268; Brunswick & T. Water Dist. *v.* Maine Water Co. (1904) 99 Me. 371, 59 Atl. 537; Milwaukee El. Ry. & Light Co. *v.* Milwaukee (1898) 87 Fed. 577, 581; Missouri, Kansas & Texas Ry. Co. *v.* Love (1910) 177 Fed. 495, 501; Pennsylvania R. R. Co. *v.* Philadelphia County (1908) 220 Pa. St. 100, 106, 68 Atl. 676, 679; Willcox *v.* Consolidated Gas Co. (1909) 212 U. S. 19. "What may be a reasonable rate or return, as a matter of legal policy, having due regard to encouraging the investment of capital in railroad enterprises is one question; but when the inquiry becomes a judicial problem, to be considered as involving the taking of the railroad's property, it is essentially a different question. The law makers, dealing with the legislature problem, might think that in successful business years a maximum return, for example, of 10 per cent. upon the investment would be reasonable. The courts, dealing with the judicial problem, are affected by locality and attending risks and circumstances involved in the particular case, and apparently insist only upon a minimum return to the owner of the property devoted to the public use which will be reasonable (say, for example, 6 per cent) upon the properly computed investment." Louisville & Nashville R. Co. *v.* Siler (1911) 186 Fed. 176, 189-190. See also 2 Wyman, Public Service Corporations (1911) §§ 1112, 1120.

[55]Shepard *v.* Northern Pac. Ry. Co. (1911) 184 Fed. 765, 815.

[56]It must be noted, that while public service corporations "have in general more assured permanence and less danger of ruinous competition than most private enterprises," 2 Wyman, Public Service Corporations (1911) § 1134, their business is still attended with risks, and they are not by any means guaranteed by the State a given rate of return. Home Tel. Co. *v.* Carthage (Mo. 1911) 139 S. W. 547, 553.

ment is efficient and the income large enough not only to keep the plant in good condition, but also to afford a rate of interest sufficiently above that on secured investments, such as mortgages, to compensate for the risk, the investor will take it.[57] The most definite answer that can be made is to say, that the investor is entitled to the rate of return generally realized in the particular community upon equally hazardous enterprises, or to the local rate of return ordinarily sought and obtained on investments of a similar character. Interest in this general sense usually has a fairly well-defined market or current rate.[58]

The legal rate of interest in the particular jurisdiction in which the plant is located throws but little light on the question. It is, however, frequently adopted by the courts as a test when evidence of the market rate is lacking.[59] It has some evidential value as to the rate for unsecured but non-hazardous enterprises.[60]

[57]For discussion of the peculiar risks of public service enterprises, particularly railroads, see 2 Wyman, Public Service Corporations (1911) §§ 1139, 1140.

[58]2 Wyman, Public Service Corporations (1911) § 1133. The market rate is adopted as the proper test in re Arkansas Rate Cases (1911) 187 Fed. 290, 345; Capital City Gaslight Co. *v.* Des Moines (1896) 72 Fed. 829, 848; Cedar Rapids Gaslight Co. *v.* Cedar Rapids (1909) 144 Ia. 426, 120 N. W. 966, 974; Central of Georgia Ry. Co. *v.* Railroad Com. of Ala. (1908) 161 Fed. 925, 993-6; Coal & Coke Co. *v.* Conley (W. Va. 1910) 67 S. E. 613, 639; Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849, 870; Cumberland Tel. & Tel Co. *v.* Louisville (1911) 187 Fed. 637, 656; Hill *v.* Antigo Water Co. (1909) 3 Wis. R. R. Com. Rep. 623; Milwaukee El. Ry. & Light Co. *v.* Milwaukee (1898) 87 Fed. 577, 585; Missouri, Kansas & Texas Ry. Co. *v.* Love (1910) 177 Fed. 493, 501; Pioneer Tel. & Tel. Co. *v.* Westenhaver (Jan. 10, 1911) Sup. Ct. of Oklahoma, No. 503 (not yet reported); San Diego Water Co. *v.* City of San Diego (1897) 118 Cal. 556, 50 Pac. 633; Steenerson *v.* Great Northern Ry. Co. (1897) 69 Minn. 353, 72 N. W. 713, 729; Trustees of Saratoga Springs *v.* Saratoga Gas etc. Co. (N. Y. 1907) 122 App. Div. 203, 220, reversed on other grounds, 191 N. Y. 123; Report of St. Louis Pub. Serv. Comm. on Rates for Electric Light, etc. Feb. 17th, 1911, 66. For criticism see 9 COLUMBIA LAW REVIEW 273.

[59]The form of expression frequently used is that the rate of return should not be less than the legal rate, Brymer *v.* Butler Water Co. (1897) 179 Pa. St. 231, 36 Atl. 249; Central of Ga. Ry. Co. *v.* Railroad Com. of Ala. (1908) 161 Fed. 925, 994-6; Pennsylvania R. R. Co. *v.* Philadelphia County (1908) 220 Pa. St. 100, 106, 68 Atl. 676, 679; Columbus Ry. & Light Co. *v.* Columbus, C. C., S. D. Ohio, E. Div., No. 1206, Report of Special Master, June 8th, 1906, 56.

[60]Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849, 870. What is a fair return is a question of fact, Cedar Rapids Gaslight Co. *v.* Cedar Rapids (1909) 144 Ia. 426, 120 N. W. 966, 973. See the following cases: In re Arkansas Railroad Rates (1909) 168 Fed. 720, s. c. (1911) 187 Fed. 290, 348. (6% held a reasonable return on a railroad investment, where rate on bonds was 4% or 5%); Coal & Coke Ry. Co. *v.* Conley (W. Va. 1910) 67 S. E. 613, 642, (2½% on investment in a railroad held unreasonable); Cumberland Tel. & Tel. Co. *v.* Louisville (1911) 187 Fed. 637, 656 (7% allowed because of large risk of losing business and because

Summary.

There is a constitutional limitation upon rate regulation which requires that there shall be left to the public utility a fair return upon the value employed for the public service. In the earlier cases there was much controversy as to method of determining the value employed for the public service, or present value. Various tests were applied, but analysis showed each to be inaccurate. All were considered evidentiary.

One of these, the cost of reproduction, though discredited at first, has steadily grown in favor with courts, commissions and engineers. With proper allowances for depreciation and values of intangibles, it appears to be the fairest and most logical measure of present value that can be found. Its complexity is naturally a cause for criticism, but it must not be expected that the value of an extensive property can be worked out as simply as an arithmetical addition. In at least three of the four most recent cases dealing with valuations in the Supreme Court of the United States,[61] the cost of reproduction seems to be the basic figure,

of expense incident to public regulation.) Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849; Willcox *v.* Consolidated Gas Co. (1909) 212 U. S. 19 (6% net return on the investment in a gas plant in New York City deemed reasonable); Contra Costa Water Co. *v.* Oakland (1904) 165 Fed. 518, (less than 5% net return on a water plant deemed confiscatory); Home Tel. Co. *v.* Carthage (Mo. 1911) 139 S. W. 547, 553 (6% allowed on telephone investment); Lincoln Gas & Electric Light Co. *v.* City of Lincoln (1909) 182 Fed. 926, 929, (6% return on the investment in a gas plant allowed); Spring Valley Waterworks *v.* San Francisco (1903) 124 Fed. 574; Spring Valley Water Company *v.* San Francisco (1908) 165 Fed. 667, (5% held to be the least proper net return on the investment in a waterworks); Stanislaus County *v.* San Joaquin C. & I. Co. (1904) 192 U. S. 201, (6% profit on waterworks investment allowed); Pioneer Tel. & Tel Co. *v.* Westenhaver (Jan. 10, 1911) Sup. Ct. of Oklahoma, No. 503 (not yet reported), (5½% net return on investment in a telephone company not excessive); Shepard *v.* Northern Pac. Ry. Co. (1911) 184 Fed. 765, 816 (7% net return on railroad investment not excessive). The income from reserves may be taken into account in considering the amount of net return; Monheimer *v.* Brooklyn Union El. R. R. Co. (Mch. 8, 1910) Pub. Ser. Comm. 1st Dist. N. Y. Nos. 351 & 353 (10 cent car fare to Coney Island) 12. The rate of interest on secured investments is a proper consideration, Milwaukee El. Ry. & Light Co. *v.* Milwaukee (1898) 87 Fed. 577, 585. Investments in public service companies may usually be regarded as fairly safe, Consolidated Gas Co. *v.* City of New York (1907) 157 Fed. 849, 870; Cotting *v.* Kansas City Stock-Yards Co. (1897) 82 Fed. 850, 856, reversed 163 U. S. 79, on other grounds. There is a close relation between the rate of depreciation and the amount of risk involved. Cumberland Telephone & Telegraph C. *v.* Railroad Commission (1907) 156 Fed. 823, 832, reversed 212 U. S. 414.

[61]Knoxville *v.* Knoxville Water Co. (1909) 212 U. S. 1; Willcox *v.* Consolidated Gas Co. (1909) 212 U. S. 19; Louisiana R. R. Comm. *v.* Cumberland Tel. Co. (1909) 212 U. S. 414; Omaha *v.* Omaha Water Co. (1910) 218 U. S. 180.

and in numbers of cases in the lower federal courts it is recognized as the most weighty evidence of present value.

There are statements in some of the cases, and they never have been overruled, to the effect that under some circumstances value of the services rather than economic cost may be the real test. This appears to have been also the theory of the Interstate Commerce Commission in the beginning, but both it and the courts now have little to say of this aspect of the problem.[62]

The factors most difficult of determination are "going value" and "franchises." The courts recognize both as proper for consideration in rate cases. It is submitted that franchises should not be given a value other than the real investment in them, for the reason that the value usually given them is based on income. As it is proper income which rate regulation seeks to determine, a logical result cannot be reached by computing one on the basis of the other.

In determining a reasonable return the cost of operation must be allowed before net return is considered. The test to be applied to ascertain what are proper factors in this computation is that the items must be usual, necessary and reasonable. In these days of scientific management a depreciation reserve comes within these tests. Expenditures which increase the investment are chargeable only to capital, for otherwise the consumer would be obliged to pay not only for the use, but also for the purchase price, of the plant. Similar considerations are applicable to the question of whether interest on funded debt is a part of the expense of operation.

What is a fair net return on present value is really a question of fact which must be determined by the circumstances of each particular case. Briefly, the market or current rate upon equally hazardous investments is determinative,[63] for, while rates cannot legally be reduced to a point where they become confiscatory, the

[62] A thorough exposition of these cases will be found in an address by Hon. J. W. Bailey of Texas, before the New York State Bar Association, at Rochester, N. Y., Jan. 20, 1910, entitled, "The Power to Regulate Transportation Charges by Statutory Enactment." Professor M. S. Hammond, in his recent book in which "The Railway Rate Theories of the Interstate Commerce Commission" are analyzed, states that at first the commission considered "value" of service to be the true theory of rate making, but his conclusion is that now: "It may then be held to be the well-established opinion of the Interstate Commerce Commission, as well as of the courts, that the test to be applied to determine the reasonableness of an entire system of rates is whether these rates yield only a fair return on the value of that which is employed for the public convenience." See also Puget Sound El. Ry. *v.* Railroad Com. (Wash. 1911) 117 Pac. 739, 743.

[63] "Market" rate must be carefully differentiated from "legal" rate.

security of the investment is not guaranteed by the public.[64] Rates which should yield a fair return may cease to do so because of competition or other forces, but they are not thereby rendered confiscatory. It is under such circumstances that value of the service becomes an important consideration.

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[64] "The prevailing rate of interest on money loaned, the hazard of the business, the life of the property used, the reliance upon the constancy of a return, which depends largely upon the existence or probability of competition, these, as well as many others, are proper matters for consideration. And in passing upon the question, the fact should not be overlooked that no return whatever is guaranteed to the owner of the public utility. Upon that score it occupies no better ground than the owner of capital invested in a private enterprise," Home Telephone Co. *v.* Carthage (Mo. 1911) 139 S. W. 547, 553.